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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,541	04/14/2004	Hiroki Sakurai	04173.0448	4431
22852	7590	01/30/2006	EXAMINER	
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			NGUYEN, TAI V	
			ART UNIT	PAPER NUMBER
			3729	

DATE MAILED: 01/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/823,541

Applicant(s)

SAKURAI ET AL.

Examiner

Tai Van Nguyen

Art Unit

3729

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 17-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,8-10 and 16 is/are rejected.
- 7) ☒ Claim(s) 3-7 and 11-15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/14/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-16, drawn to a manufacturing method of an integrated capacitor, classified in class 29, subclass 25.41.
 - II. Claims 17-20, drawn to an integrated capacitor, classified in class 361, subclass 302.

The inventions are distinct, each from the other because of the following reason:

2. Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product of Group II, can be made by a materially different process, such as one without any embedding.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Richard, Burgujian on 1/12/2006 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-16. Affirmation of this election must be made by applicant in replying to this Office action. Claims 17-20 have been withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Specification

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
6. The following title is suggested: A METHOD MANUFACTURING OF AN INTEGRATED CAPACITOR.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-2, 8-10 and 16, are rejected under 35 U.S.C. 102(b) as being anticipated by Morie et al (US 4,645,564).

As applied to claims 1-2, Morie et al disclose a manufacturing method of an integrated capacitor comprising: forming a hole as trench (13, Fig. 2) in a semiconductor substrate (11); depositing a dielectric film (27) on an inner face of the formed hole; heat-treating the deposited dielectric film (column 5, lines 7-15); depositing a silicon film (23A) on the dielectric film; embedding a resist film (21) in the hole except an upper portion of the inner face of the hole on which the dielectric film and the forming a hole in a semiconductor substrate; depositing a dielectric film on an inner face of the formed silicon film are deposited; etching the silicon film on the heat-treated dielectric film with the embedded resist film as a mask (column 5, lines 1-20); removing the resist film

(column 5, lines 22-25); removing the heat-treated dielectric film by etching with the silicon film remaining after the etching as a mask (column 5, lines 1-23); and embedding an electrode (conductive layer 29) formed surrounding on the insulating material in the hole having the dielectric film remaining after the removal by etching.

As applied to claims 9-10 and 16, Morie et al disclose a manufacturing method of an integrated capacitor comprising: forming a hole as trench (13, Fig. 2) in a semiconductor substrate (11); depositing a dielectric film (27) on an inner face of the formed hole; depositing a silicon film on the deposited dielectric film; embedding a resist film (21) in the hole except an upper portion of the inner face of the hole on which the dielectric film and the silicon film are deposited; etching the silicon film on the deposited dielectric film with the embedded resist film as a mask (21); removing the resist film, and removing the deposited dielectric film by etching with the silicon film remaining after the etching as a mask (column 5, lines 1-50+); heat-treating the dielectric film remaining after the removal by etching (column 6, lines 7-15); and embedding an electrode material as read conductive layer (29) formed surrounding in the hole having the dielectric film remaining after the removal by etching.

Allowable Subject Matter

9. Claims 3-7 and 11-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

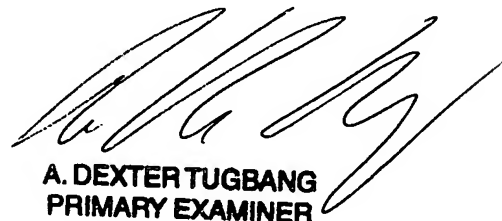
10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tai Van Nguyen whose telephone number is 571-272-4567. The examiner can normally be reached on M-F (7:30 A.M - 4:30 P.M).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TN. January 18, 2006


A. DEXTER TUGBANG
PRIMARY EXAMINER